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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,376	08/14/2003	Allan J. Kuchinsky	10030986-1	2579

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EXAMINER
AHLUWALIA, NAVNEET K

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/642,376	KUCHINSKY ET AL.
	Examiner	Art Unit	
	Navneet K. Ahluwalia	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-75* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-75* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 August 2003 and 11 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03/24/2006*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 03202006

DETAILED ACTION

1.   The application has been examined. Claims 1 – 75 are pending in this office

action.

Double Patenting

2.   A rejection based on double patenting of the "same invention" type finds its
support in the language of 35 U.S.C. 101 which states that "whoever invents or
discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis
added). Thus, the term "same invention," in this context, means an invention drawn to
identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re
Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164
USPQ 619 (CCPA 1970).

        A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by
canceling or amending the conflicting claims so they are no longer coextensive in
scope. The filing of a terminal disclaimer <u>cannot</u> overcome a double patenting rejection
based upon 35 U.S.C. 101.

3.   Claims 32 – 36 are provisionally rejected under 35 U.S.C. 101 as claiming the

same invention as that of claims 111 - 116 of copending Application No. 10/641,492.

This is a <u>provisional</u> double patenting rejection since the conflicting claims have not in

fact been patented.

4.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory
obviousness-type double patenting rejection is appropriate where the conflicting claims
are not identical, but at least one examined application claim is not patentably distinct
from the reference claim(s) because the examined application claim is either anticipated
by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140
F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29
USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.
1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422
F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163
USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d)
may be used to overcome an actual or provisional rejection based on a nonstatutory

double patenting ground provided the conflicting application or patent either is shown to
be commonly owned with this application, or claims an invention made as a result of
activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

5.   Claims 1 – 31, 38 – 66 and 68 – 75 are provisionally rejected on the ground of

nonstatutory obviousness-type double patenting as being unpatentable over claims 111

- 116 of copending Application No. 10/641,492.

The subject matter claimed in the instant application is fully disclosed in the

referenced copending application and would be covered by any patent granted on that

copending application since the referenced copending application and the instant

application are claiming common subject matter as follows: Although the conflicting

claims are not identical, they are not patentably distinct from each other because claims

of U.S. Patent Application No. 10/641,492 contain every element of claims 1 – 31, 38 –

66 and 68 – 75 of the instant specification.

6.   This is a provisional obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

8.   Claims 1 – 37 and 58 – 60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9.   Regarding claims 1 - 37, the language of claims 1, 20, 24, 30, 32 recite the phrase "may be" rendering the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

10.   Regarding claims 58 – 60, the preamble of the claims recite " a method comprising forwarding a result", " a method comprising transmitting data representing a result", " a method comprising receiving a result", where the result is obtained from a method of claim 38. As understood by the examiner the method claim 38 comprises of steps of importing text, text mining, identifying entities and interactions, and further assigning directionality to the interactions, but there is no suggestion of a result being obtained. Thus claims 58 – 60 are vague and indefinite.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12.   Claims 1 – 75 are rejected under 35 U.S.C. 102(e) as being anticipated by

Hogue et al. ('Hogue' herein after) (US 6,745,204 B1).

With respect to claim 1,

    Hogue discloses a tool providing interactive capabilities for user involvement in

extracting and disambiguating biological information in text, said tool comprising:

-   a text viewer into which at least a portion of a textual document may be

  imported and viewed (column 5 lines 13 – 14 and 26 – 28, Hogue);

-   means for text mining the at least a portion of a textual document having been

  imported into the text viewer (column 7 lines 19 – 22 and 58 – 63, Hogue);

-   a list-based text editor that lists entities and interactions having been

  identified by said means for text mining (column 11 lines 27 – 31 and 46 – 54,

  Hogue); and

-   means for assigning directionality to the listed interactions (column 12 lines

  54 – 57, Hogue).

With respect to claim 2,

    Hogue discloses the tool of claim 1, further comprising means for representing

the entities and interactions having been identified in a local format (column 7 lines 53 –

55 and lines 40 – 47, Hogue).

With respect to claim 3,

Hogue discloses the tool of claim 2, further comprising means for generating, displaying and interactively manipulating a biological diagram, based upon the entities and interactions represented in said local format (figure 13 and column 3lines 1 – 15, Hogue).

With respect to claim 4,

Hogue discloses the tool of claim 1, wherein each said entity and interaction listed points back to a location of the portion of the textual document where it was identified (column 8 lines 5 – 12, Hogue).

With respect to claim 5,

Hogue discloses the tool of claim 1, wherein said means for assigning includes slots associated with each said interaction, to which a user can identify one or more of said entities involved in the interaction, and assign roles of each said entity played in the interaction (column 3 lines 29 – 46 and column 7 lines 46 – 53, Hogue).

With respect to claim 6,

Hogue discloses the tool of claim 5, wherein said roles comprise affecters, affected and unassigned (figure 8, column 10 lines 26 – 33 and column 12 lines 40 – 47, Hogue).

With respect to claim 7,

Hogue discloses the tool of claim 6, wherein said roles further comprise mediator

and unknown (column 12 lines 51 – 67, Hogue).

With respect to claim 8,

Hogue discloses the tool of claim 1, further comprising a user context, wherein

said means for text mining text mines based upon contents of said user context (column

2 lines 1 – 4, Hogue).

With respect to claim 9,

Hogue discloses the tool of claim 8, wherein said user context comprises at least

one entity or interaction (column 7 lines 58 – 63, Hogue).

With respect to claim 10,

Hogue discloses the tool of claim 8, further comprising means for managing said

user context, wherein said means for managing permits editing of an existing user

context, as well as creation of a new user context (column 20 lines 10 – 19, Hogue).

With respect to claim 11,

Hogue discloses the tool of claim 10, wherein said means for managing allows

selection of specific entities and interactions to be added to said user context (column 5

lines 16 – 35, 46 – 54 and column 6 lines 26 – 32, Hogue).

With respect to claim 12,

Hogue discloses the tool of claim 10, wherein said means for managing allows

direct inputting of entities and interactions into said user context (column 5 lines 55 – 67

and column 6 lines 26 – 32, Hogue).

With respect to claim 13,

Hogue discloses the tool of claim 2, further comprising a user context, wherein

said means for text mining text mines based upon contents of said user context (column

7 lines 58 – 63, Hogue); and means for managing said user context, wherein said

means for managing permits editing of an existing user context, as well as creation of a

new user context (column 20 lines 10 – 19, Hogue).

With respect to claim 14,

Hogue discloses the tool of claim 13, wherein said means for managing allows

selection of specific entities and interactions to be added to said user context (column 5

lines 16 – 35, 46 – 54 and column 6 lines 26 – 32, Hogue).

With respect to claim 15,

Hogue discloses the tool of claim 13, wherein said means for managing allows

direct inputting of entities and interactions into said user context (column 5 lines 16 –

35, 46 – 54 and column 6 lines 26 – 32, Hogue).

With respect to claim 16,

Hogue discloses the tool of claim 13, wherein said means for managing

facilitates selection of local format representations of entities and interactions, and

entering said local format representations into said user context (column 7 lines 53 – 55

and lines 40 – 47, Hogue).

With respect to claim 17,

Hogue discloses the tool of claim 3, further comprising a user context, wherein

said means for text mining text mines based upon contents of said user context; and

means for managing said user context, wherein said means for managing permits

editing of an existing user context, as well as creation of a new user context (column 20

lines 10 – 19, Hogue), and wherein said means for managing facilitates selection of

local format representations of entities and interactions generated from said

manipulation of a biological diagram (column 5 lines 16 – 35, 46 – 54 and column 6

lines 26 – 32, Hogue).

With respect to claim 18,

Hogue discloses the tool of claim 8, further comprising means for managing

aliases, wherein said means for managing aliases equates multiple names for the same

entity, enabling said tool to identify each said entity by multiple names as they occur in

the textual documents (column 20 lines 37 – 47, Hogue).

With respect to claim 19,

Hogue discloses the tool of claim 18, further comprising means for resolving

errors in alias management (column 20 lines 37 – 47, Hogue).

With respect to claim 20,

Hogue discloses a tool providing interactive capabilities for user involvement in

extracting and disambiguating biological information in text, said tool comprising:

- a text viewer into which at least a portion of a textual document may be

   imported and viewed (column 5 lines 13 – 14 and 26 – 28, Hogue);

- means for text mining the at least a portion of a textual document having been

   imported into the text viewer (column 7 lines 19 – 22 and 58 – 63, Hogue);

- a list-based text editor that lists entities and interactions having been

   identified by said means for text mining (column 11 lines 27 – 31 and 46 – 54,

   Hogue);

- a canvas area for diagrammatically representing said entities and

   interactions; and means for populating diagrammatic renderings on said

   canvas with one or more of said entities and interactions identified by said

   means for text mining (column 5 lines 1 – 5, Hogue).

With respect to claim 21,

Hogue discloses the tool of claim 20, further comprising means for representing

said entities and interactions in a local format (column 7 lines 53 – 55 and lines 40 – 47,

Hogue).

With respect to claim 22,

Hogue discloses the tool of claim 21, further comprising means for generating,

displaying and interactively manipulating a biological diagram, based upon the entities

and interactions represented in said local format (figure 13 and column 3lines 1 – 15,

Hogue).

With respect to claim 23,

Hogue discloses the tool of claim 20, wherein said means for populating includes

means for assigning directionality of interactions (column 12 lines 54 – 57, Hogue).

With respect to claim 24,

Hogue discloses the tool of claim 20, further comprising a palette for containing

entities and interactions selected by a user from lists displayed by said list-based text

editor, wherein said entities and interactions in said palette may be dragged to said

canvas to populate a diagrammatic rendering (column 4 lines 63 – 68, Hogue).

With respect to claim 25,

Hogue discloses the tool of claim 20, wherein, upon populating a diagrammatic

rendering, assignments of roles played by entities populating said diagrammatic

rendering are automatically assigned in a list displayed by said list-based text editor

(column 3 lines 29 – 46 and column 7 lines 46 – 53, Hogue).

With respect to claim 26,

Hogue discloses the tool of claim 20, further comprising means for adding

elements to a diagrammatic rendering on said canvas by freehand sketching by the

user (column 3 lines 6 – 9, Hogue).

With respect to claim 27,

Hogue discloses the tool of claim 26, wherein each said entity and interaction

displayed on said canvas and listed in said list-based text editor points back to a

location of the portion of the textual document where it was identified (column 8 lines 5

– 12, Hogue).

With respect to claim 28,

Hogue discloses the tool of claim 20, wherein said diagrammatic renderings are

populated by selecting at least one entity or interaction from said list-based text editor

and dragging to a desired location in a diagrammatic rendering displayed on the canvas

(column 2 lines 55 – 64, Hogue).

With respect to claim 29,

Hogue discloses the tool of claim 20, wherein said diagrammatic renderings are populated by selecting at least one entity or interaction from said text in said text viewer and dragging to a desired location in a diagrammatic rendering displayed on the canvas (column 2 lines 55 - 64).

With respect to claim 30,

Hogue discloses a tool for building biological networks of interactions from text, said tool comprising:

-   a text viewer into which at least a portion of a textual document may be imported and viewed (column 5 lines 13 – 14 and 26 – 28, Hogue);

-   means for text mining the at least a portion of a textual document having been imported into the text viewer (column 7 lines 19 – 22 and 58 – 63, Hogue);

-   a list-based text editor that lists entities and interactions having been identified by said means for text mining (column 11 lines 27 – 31 and 46 – 54, Hogue);

-   means for assigning directionality to the listed interactions (column 12 lines 54 – 57, Hogue); and

-   means for selecting interactions and associated entities in the list-based editor, merging common entities and displaying a resulting network of the

interactions in a window of said text view or in a separate network viewer

(figure 13 and column 3lines 1 – 15, Hogue).

With respect to claim 31,

Hogue discloses the tool of claim 30, further comprising means for representing

said entities and interactions in a local format (column 7 lines 53 – 55 and lines 40 – 47,

Hogue).

With respect to claim 32,

Hogue discloses a tool for comparing extracted biological knowledge extracted

from text, against an existing biological diagram, said tool comprising:

- a text viewer into which at least a portion of a textual document may be

  imported and viewed (column 5 lines 13 – 14 and 26 – 28, Hogue);

- means for text mining the at least a portion of a textual document having been

  imported into the text viewer (column 7 lines 19 – 22 and 58 – 63, Hogue);

- a list-based text editor that lists entities and interactions having been

  identified by said means for text mining (column 11 lines 27 – 31 and 46 – 54,

  Hogue);

- a diagram viewer and means for importing at least a portion of an existing

  biological diagram into said diagram viewer (column 8 lines 35 – 45, Hogue);

- means for overlaying the identified entities and interactions on said at least a

  portion of an existing biological diagram that is displayed in said diagram

viewer; and means for visually distinguishing the overlaid entities and

interactions from a remainder of the displayed biological diagram (column 5

lines 1 – 5, Hogue).

With respect to claim 33,

Hogue discloses the tool of claim 32, further comprising means for representing

said entities and interactions in a local format (column 7 lines 53 – 55 and lines 40 – 47,

Hogue).

With respect to claim 34,

Hogue discloses the tool of claim 32, wherein each said entity and interaction

overlaid points back to a location of the portion of the textual document where it was

identified (column 8 lines 5 – 12, Hogue).

With respect to claim 35,

Hogue discloses the tool of claim 32, further comprising means for assigning

directionality to the listed interactions (column 3 lines 29 – 46 and column 7 lines 46 –

53, Hogue); means for selecting interactions and associated entities in the list-based

editor and populating diagrammatic renderings representing said selected interactions

and associated entities, wherein said populated diagrammatic renderings are overlaid

on the at least a portion of an existing biological diagram displayed in said diagram

viewer (column 3 lines 29 – 46 and column 7 lines 46 – 53, Hogue).

With respect to claim 36,

Hogue discloses the tool of claim 35, further comprising means for converting the

at least a portion of an existing biological diagram to a local format, and based on

values contained in the local format, comparing said diagrammatic renderings with

corresponding parts of the existing biological diagram (column 2 lines 55 – 64, Hogue).

With respect to claim 37,

Hogue discloses the tool of claim 32, further comprising means for automatically

searching databases of existing biological diagrams that contain a user-specified set of

interactions and returning those existing biological diagrams that contain the user-

specified set of interactions to the user for display in said diagram viewer for use in

overlaying and comparing the identified entities and interactions therewith (column 20

lines 9 – 19, Hogue).

With respect to claim 38,

Hogue discloses a method of providing interactive capabilities for user

involvement in extracting and disambiguating biological information in text, said method

comprising the steps of:

- importing at least a portion of a textual document into a text viewer (column 5

   lines 13 – 14 and 26 – 28, Hogue);

-   text mining the at least a portion of a textual document to identify biological

    entities and interactions (column 7 lines 19 – 22 and 58 – 63, Hogue);

-   listing the identified entities and interactions in a list-based text editor (column

    11 lines 27 – 31 and 46 – 54, Hogue); and

-   assigning directionality to the listed interactions by associating listed entities

    as affectors or affecteds with respect to the interactions (column 12 lines 54 –

    57, Hogue).

With respect to claim 39,

Hogue discloses the method of claim 38, further comprising representing said

entities and interactions in a local format (column 7 lines 53 – 55 and lines 40 – 47,

Hogue).

With respect to claim 40,

Hogue discloses the method of claim 38, further comprising providing a user

context, wherein said user context comprises data upon which said text mining is based

(column 2 lines 1 – 4, Hogue).

With respect to claim 41,

Hogue discloses the method of claim 40, further comprising managing said user

context to edit the contents thereof or to create a new user context (column 20 lines 10

– 19, Hogue).

With respect to claim 42,

Hogue discloses the method of claim 41, wherein said managing comprises

selecting at least one entity or interaction and adding the selection to the user context

(column 5 lines 16 – 35, 46 – 54, Hogue).

With respect to claim 43,

Hogue discloses the method of claim 41, wherein said managing comprises

directly inputting at least one entity or interaction to the user context by a user, or editing

existing data, by the user, in the user context (column 5 lines 16 – 35, 46 – 54 and

column 6 lines 26 – 32, Hogue).

With respect to claim 44,

Hogue discloses the method of claim 41, wherein said managing comprises

selecting at least one local format representation of an entity or interaction, and entering

said at least one local format representation into the user context (column 5 lines 16 –

35, 46 – 54 and column 6 lines 26 – 32, Hogue).

With respect to claim 45,

Hogue discloses the method of claim 38, further comprising managing aliases of

entities and interactions, to equate multiple names for the same entity or interaction, so

that said text mining, listing and assigning directionality steps are carried out with

respect to aliases of entities and interactions contained in the user context, as well as

the actual names contained in the user context (column 20 lines 37 – 47, Hogue).

With respect to claim 46,

Hogue discloses the method of claim 45, further comprising resolving errors in

alias management (column 20 lines 37 – 47, Hogue).

With respect to claim 47,

Hogue discloses the method of claim 46, wherein said error resolution is carried

out interactively by a user (column 20 lines 37 – 47, Hogue).

With respect to claim 48,

Hogue discloses the method of claim 39, further comprising at least one of the

steps selected from the group consisting of:

-   generating a biological diagram based on said entities and interactions

    represented in said local format; displaying a biological diagram based on

    said entities and interactions represented in said local format (figure 13 and

    column 3 lines 1 – 15, Hogue); and

-   interactively manipulating a biological diagram based on said entities and

    interactions represented in said local format (column 2 lines 55 – 64, Hogue).

With respect to claim 49,

Hogue discloses the method of claim 38, further comprising:

-   converting at least a portion of a biological diagram to local format objects

    representing entities and interactions displayed in the biological diagram

    (column 2 lines 55 – 64, Hogue); and

-   inputting at least a portion of said local format objects into a user context; and

    performing said text mining based upon the contents of the user context

    (column 2 lines 1 – 4, Hogue).

With respect to claim 50,

Hogue discloses the method of claim 38, further comprising linking each listed

entity and interaction with a location in the textual document from which each listed

entity and interaction was identified, respectively, using a local format (column 8 lines 5

– 12, Hogue).

With respect to claim 51,

Hogue discloses the method of claim 38, further comprising the steps of:

-   providing a canvas area for diagrammatically representing said entities and

    interactions; populating at least one diagrammatic rendering on the canvas

    with one or more of said entities and interactions identified by said means for

    text mining (column 5 lines 1 – 5, Hogue).

With respect to claim 52,

Hogue discloses the method of claim 51, wherein upon said populating at least one diagrammatic rendering, assignments of roles played by said entities populating said at least one diagrammatic rendering are automatically assigned in a list displayed by said list-based text editor (column 3 lines 29 – 46 and column 7 lines 46 – 53, Hogue).

With respect to claim 53,

Hogue discloses the method of claim 51, further comprising adding elements to a diagrammatic rendering on said canvas by freehand sketching by a user (column 3 lines 6 – 9, Hogue).

With respect to claim 54,

Hogue discloses the method of claim 51, wherein said diagrammatic renderings are populated by selecting at least one entity or interaction from said list-based text editor and dragging to a desired location in a diagrammatic rendering displayed on the canvas (column 2 lines 55 – 64, Hogue).

With respect to claim 55,

Hogue discloses the method of claim 51, wherein said diagrammatic renderings are populated by selecting at least one entity or interaction from said text in said text viewer and dragging to a desired location in a diagrammatic rendering displayed on the canvas (column 2 lines 55 – 64, Hogue).

With respect to claim 56,

Hogue discloses the method of claim 38, further comprising:

- performing a text search to identify a plurality of textual documents; importing

all or a subset of the plurality of documents into the text viewer (column 5

lines 13 – 14 and 26 – 28, Hogue); and

- analyzing the textual documents in batch mode to identify interactions and

entities to be listed in the list-based editor (column 7 lines 19 – 22 and 58 –

63, Hogue).

With respect to claim 57,

Hogue discloses the method of claim 38, further comprising:

- identifying aliases of at least one entity or interaction listed; and performing

operations on all aliases of the at least one entity or interaction

simultaneously with performance of those operations on the at least one

entity or interaction (column 20 lines 37 – 47, Hogue).

With respect to claim 58,

Hogue discloses a method comprising forwarding a result obtained from the

method of claim 38 to a remote location (rejected on the same rationale as for claim 38

above).

With respect to claim 59,

Hogue discloses a method comprising transmitting data representing a result

obtained from the method of claim 38 to a remote location (rejected on the same

rationale as for claim 38 above).

With respect to claim 60,

Hogue discloses a method comprising receiving a result obtained from a method

of claim 38 from a remote location (rejected on the same rationale as for claim 38

above).

With respect to claim 61,

Hogue discloses a method of providing interactive capabilities for user

involvement in extracting and disambiguating biological information in text to be used in

generating a biological diagram, said method comprising the steps of:

- importing at least a portion of a textual document into a text viewer (column 5

  lines 13 – 14 and 26 – 28, Hogue);

- text mining the at least a portion of a textual document to identify biological

  entities and interactions (column 7 lines 19 – 22 and 58 – 63, Hogue) (column

  7 lines 19 – 22 and 58 – 63, Hogue);

- listing the identified entities and interactions in a list-based text editor (column

  11 lines 27 – 31 and 46 – 54, Hogue);

- providing a canvas area for diagrammatically representing entities and

  interactions having been identified by said text mining (column 5 lines 1 – 5,

  Hogue); and

- populating a diagrammatic rendering on the canvas with one or more of said

  entities and interactions identified by said means for text mining, including

  indicating directionality of at least one interaction represented by the

  diagrammatic rendering (column 7 lines 53 – 55 and lines 40 – 47, Hogue);

  wherein, upon populating the diagrammatic rendering, assignments of roles

  played by entities (column 12 lines 54 – 57, Hogue) populating said

  diagrammatic rendering are automatically assigned in a list displayed by said

  list-based text editor (column 3 lines 29 – 46 and column 7 lines 46 – 53,

  Hogue).

With respect to claim 62,

Hogue discloses the method of claim 61, wherein each said entity and interaction

displayed on said canvas and listed in said list-based text editor is automatically linked

with a location of each portion of the textual document where it was identified, using a

local format (column 8 lines 5 – 12, Hogue).

With respect to claim 63,

Hogue discloses the method for building biological networks of interactions from

text, said method comprising the steps of:

- importing at least a portion of a textual document into a text viewer (column 5 lines 13 – 14 and 26 – 28, Hogue);

- text mining the at least a portion of a textual document having been imported into the text viewer (column 7 lines 19 – 22 and 58 – 63, Hogue);

- listing entities and interactions having been identified by said text mining (column 11 lines 27 – 31 and 46 – 54, Hogue);

- assigning directionality to the listed interactions; and selecting interactions and associated entities and displaying a resulting network of the interactions and entities (column 12 lines 54 – 57, Hogue).

With respect to claim 64,

Hogue discloses the method of claim 63, wherein said selecting and displaying include merging common entities to form a network of interactions and entities (column 12 lines 54 – 57, Hogue).

With respect to claim 65,

Hogue discloses the method of claim 63, further comprising representing said entities and interactions in a local format (column 7 lines 53 – 55 and lines 40 – 47, Hogue).

With respect to claim 66,

Hogue discloses the method of claim 65, further comprising the steps of:

-   converting the at least a portion of an existing biological diagram to a local

    format; and based on values contained in the local format describing the

    existing biological diagram, comparing the selected entities and interactions

    with corresponding parts of the existing biological diagram (column 2 lines 55

    – 64, Hogue).

With respect to claim 67,

Hogue discloses the method of claim 63, further comprising the steps of:

-   automatically searching databases of existing biological diagrams that contain

    a user-specified set of interactions; and returning existing biological diagrams

    that contain the user-specified set of interactions to the user for use in said

    overlaying the identified entities and interactions on at least a portion of an

    existing biological diagram (column 20 lines 9 – 19, Hogue).

With respect to claim 68,

Hogue discloses a computer readable medium carrying one or more sequences

of instructions for user involvement in extracting and disambiguating biological

information in text to be used in generating a biological diagram, wherein execution of

one or more sequences of instructions by one or more processors causes the one or

more processors to perform the steps of:

-   importing at least a portion of a textual document into a text viewer (column 5

    lines 13 – 14 and 26 – 28, Hogue);

- text mining the at least a portion of a textual document to identify biological

  entities and interactions (column 7 lines 19 – 22 and 58 – 63, Hogue);

- listing the identified entities and interactions in a list-based text editor (column

  11 lines 27 – 31 and 46 – 54, Hogue); and

- assigning directionality to the listed interactions by associating listed entities

  as affectors or affecteds with respect to the interactions (column 12 lines 54 –

  57, Hogue).

With respect to claim 69,

Hogue discloses the computer readable medium of claim 68, wherein execution

of one or more sequences of instructions by one or more processors causes the one or

more processors to perform the additional step of linking each listed entity and

interaction with a location in the textual document from which each listed entity and

interaction was identified, respectively, using a local format (column 8 lines 5 – 12,

Hogue).

With respect to claim 70,

Hogue discloses the computer readable medium of claim 68, wherein execution

of one or more sequences of instructions by one or more processors causes the one or

more processors to perform the additional steps of:

- providing a canvas area for diagrammatically representing said identified

  entities and interactions (column 5 lines 1 – 5, Hogue); and

- populating at least one of the diagrammatic renderings on the canvas with one or more of said entities and interactions identified by said means for text mining (column 7 lines 53 – 55 and lines 40 – 47, Hogue).

With respect to claim 71,

Hogue discloses the computer readable medium of claim 70, wherein execution of one or more sequences of instructions by one or more processors causes the one or more processors to perform the additional steps of adding elements to a diagrammatic rendering on the canvas or creating a diagrammatic rendering on the canvas by freehand sketching (column 3 lines 6 – 9, Hogue).

With respect to claim 72,

Hogue discloses the computer readable medium of claim 70, wherein execution of one or more sequences of instructions by one or more processors causes the one or more processors to perform the step of populating said diagrammatic renderings, upon selection of at least one entity or interaction from said list-based text editor and dragging to a desired location in a diagrammatic rendering displayed on the canvas (column 2 lines 55 – 64 and column 4 lines 63 – 68, Hogue).

With respect to claim 73,

Hogue discloses the computer readable medium of claim 70, wherein execution of one or more sequences of instructions by one or more processors causes the one or

more processors to perform the step of populating said diagrammatic renderings, upon

selection of at least one entity or interaction from said text in said text viewer and

dragging to a desired location in a diagrammatic rendering displayed on the canvas

(column 2 lines 55 – 64 and column 4 lines 63 – 68, Hogue).

With respect to claim 74,

Hogue discloses the computer readable medium of claim 68, wherein execution

of one or more sequences of instructions by one or more processors causes the one or

more processors to perform the additional steps of:

- performing a text search to identify a plurality of textual documents (column 5

  lines 13 – 14 and 26 – 28, Hogue);

- importing all or a subset of the plurality of documents into the text viewer

  (column 7 lines 19 – 22 and 58 – 63, Hogue); and

- analyzing the textual documents in batch mode to identify interactions and

  entities to be listed in the list-based editor (column 11 lines 27 – 31 and 46 –

  54, Hogue).

With respect to claim 75,

Hogue discloses the computer readable medium of claim 68, wherein execution

of one or more sequences of instructions by one or more processors causes the one or

more processors to perform the additional steps of:

- identifying aliases of at least one entity or interaction listed; and performing

    operations on all aliases of the at least one entity or interaction

    simultaneously with performance of those operations on the at least one

    entity or interaction (column 20 lines 37 – 47, Hogue).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Dated: 03/24/2006

MOHAMMAD ALI
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